

PCT COOPERATION TREATY

PCT

NOTIFICATION OF ELECTION

(PCT Rule 61.2)

From the INTERNATIONAL BUREAU

To:

Commissioner
 US Department of Commerce
 United States Patent and Trademark
 Office, PCT
 2011 South Clark Place Room
 CP2/5C24
 Arlington, VA 22202
 ETATS-UNIS D'AMERIQUE
 in its capacity as elected Office

Date of mailing (day/month/year) 18 April 2001 (18.04.01)	
International application No. PCT/JP99/07279	Applicant's or agent's file reference HK1
International filing date (day/month/year) 24 December 1999 (24.12.99)	Priority date (day/month/year) 26 July 1999 (26.07.99)
Applicant KUROSAWA, Hajime et al	

1. The designated Office is hereby notified of its election made:

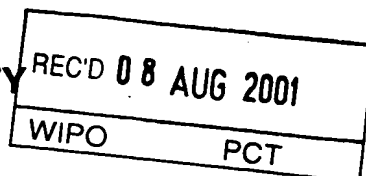
☒ in the demand filed with the International Preliminary Examining Authority on:
 19 February 2001 (19.02.01)

☐ in a notice effecting later election filed with the International Bureau on:

2. The election ☒ was
☐ was not

made, before the expiration of 19 months from the priority date or, where Rule 32 applies, within the time limit under Rule 32.2(b).

The International Bureau of WIPO 34, chemin des Colombettes 1211 Geneva 20, Switzerland Facsimile No.: (41-22) 740.14.35	Authorized officer R. Forax Telephone No.: (41-22) 338.83.38
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INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference HK1	FOR FURTHER ACTION See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)	
International application No. PCT/JP99/07279	International filing date (day/month/year) 24/12/1999	Priority date (day/month/year) 26/07/1999
International Patent Classification (IPC) or national classification and IPC B41J5/10		
Applicant KUROSAWA, Hajime et al.		


1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.
2. This REPORT consists of a total of 6 sheets, including this cover sheet.

☐ This report is also accompanied by ANNEXES, i.e. sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

 These annexes consist of a total of sheets.

3. This report contains indications relating to the following items:

- I ☒ Basis of the report
- II ☐ Priority
- III ☐ Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- IV ☐ Lack of unity of invention
- V ☒ Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- VI ☐ Certain documents cited
- VII ☒ Certain defects in the international application
- VIII ☒ Certain observations on the international application

Date of submission of the demand 19/02/2001	Date of completion of this report 06.08.2001
Name and mailing address of the international preliminary examining authority:  European Patent Office D-80298 Munich Tel. +49 89 2399 - 0 Tx: 523656 epmu d Fax: +49 89 2399 - 4465	Authorized officer Bridge, S Telephone No. +49 89 2399 2837



INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No. PCT/JP99/07279

I. Basis of the report

1. With regard to the **elements** of the international application (*Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17)*):

Description, pages:

1-21 as originally filed

Claims, No.:

1-6 as originally filed

Drawings, sheets:

1/5-5/5 as originally filed

2. With regard to the **language**, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language: , which is:

- ☐ the language of a translation furnished for the purposes of the international search (under Rule 23.1(b)).
- ☐ the language of publication of the international application (under Rule 48.3(b)).
- ☐ the language of a translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- ☐ contained in the international application in written form.
- ☐ filed together with the international application in computer readable form.
- ☐ furnished subsequently to this Authority in written form.
- ☐ furnished subsequently to this Authority in computer readable form.
- ☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- ☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. The amendments have resulted in the cancellation of:

- ☐ the description, pages:
- ☐ the claims, Nos.:

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No. PCT/JP99/07279

☐ the drawings, sheets:

5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed (Rule 70.2(c)):

(Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.)

6. Additional observations, if necessary:

V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Yes:	Claims	4
	No:	Claims	1-3,5,6
Inventive step (IS)	Yes:	Claims	
	No:	Claims	1-6
Industrial applicability (IA)	Yes:	Claims	1-6
	No:	Claims	

2. Citations and explanations
see separate sheet

VII. Certain defects in the international application

The following defects in the form or contents of the international application have been noted:
see separate sheet

VIII. Certain observations on the international application

The following observations on the clarity of the claims, description, and drawings or on the question whether the claims are fully supported by the description, are made:
see separate sheet

V Statement according to Article 35(2) PCT - Novelty, inventive step & industrial applicability

- 1 Document D1 = (see especially figure 1, column 2 lines 6-27) discloses a character input keyboard in which characters or letters can be input by typing without sight of a keyboard with the index fingers, the middle fingers, the third fingers, the little fingers of operator's right and left hands being lightly rested on eight character's or letter's home keys in a middle key-array, respectively, and the thumbs of its right and left hands being lightly rested on central portions in a lowermost key array as fingers' home positions for finger operation in touch-typing on the keyboard, said keyboard is provided with a pair of right (14) and left (12) front keys centrally juxtaposed in said lowermost key array at the front and the middle of said operator, said front keys (12, 14) being located so as to be directly depressed by the respective thumbs rested at thumbs' home positions of finger operation, respectively, one of the centrally juxtaposed right and left front keys being allocated to a front ENTER/RETURN key and the other to a SPACE key as a normal state of the keyboard, whereby direct enter/return operation by either of thumbs rested at thumbs' home positions is physically possible.

The subject matter of claim 1 does not differ from the above. Claim 1 is not new. Therefore, the subject matter of independent claim 1 does not satisfy the criterion set forth in Article 33(2) PCT.

- 2 Furthermore, Document D2 = US-A-5 351 066 (see especially figures 1a, 1b, column 11 line 67 - column 12 line 25) teaches that "It is common to reassign keys on the keyboard with other designations determined by the user. Users may prefer to have certain keys which they commonly use in a more accessible position on a keyboard. Space bar 20, by splitting into two components is particularly suited for redesignation by the user. As is commonly known, the thumb of the user is considered to be the most dexterous of the digits. On this keyboard the thumb is used to activate each space bar half 22 and 24 in any of three directions via separate electronic switches. Using appropriate firmware for keyboard 10, users may program into keyboard 10 appropriate alternate designations to one or both space bar halves 22 and 24. With such modification the user may use the left hand thumb, for example, to actuate a space signal and the right hand thumb on space bar half 24 to activate a signal corresponding to a

letter, number, cursor movement, or other designation programmed in by the user".

The skilled person would also be aware of document D1 (see especially figure 1, column 2 lines 6-27) which teaches "a more efficient typing operation" when the two parts of the space bar are respectively intended to activate SPACE and RETURN.

In consequence, the subject matter of claim 1 is only the non-inventive combination of the teachings of D2 and D1. Claim 1 is not based on an inventive step.

Therefore, the subject matter of independent claim 1 does not satisfy the criterion set forth in Article 33(3) PCT.

- 3 The additional features of dependent claims 2-4,6 only concern minor modifications which are known or suggested in each of D1 and D2, which must be regarded as normal design steps for the person skilled in the art. A combination of any of the features of dependent claims 2-4, 6 with claim 1 would not appear to add anything inventive (Article 33(3) PCT) and therefore does not seem to form a suitable basis for a new claim.

Therefore, the subject matter of dependent claims 2-4, 6 does not satisfy the criterion set forth in Articles 33(2)-33(3) PCT.

- 4 In D1 the existing ENTER/RETURN key at the extreme right of the upper and/or central row in the middle key-array is replaced by a "Shift" and a "Shift-Lock" key of high frequency of use.

The present wording of claim 5 does not differ from the above. Claim 5 is not new. Therefore, the subject matter of dependent claim 5 does not satisfy the criterion set forth in Articles 33(2)-33(3) PCT.

- 4.1 In D2 the "BACKSPACE" key is shown at the extreme right of the upper row of keys. This feature of claim 5 is therefore not new either.

Therefore, the subject matter of dependent claim 5 does not satisfy the criterion set forth in Articles 33(2)-33(3) PCT.

- 4.2 The feature of claim 5 that "the existing ENTER/RETURN key at the extreme right of the central row in the middle key-array is replaced by a BACKSPACE key" has not been disclosed in any of the available prior art.

**INTERNATIONAL PRELIMINARY
EXAMINATION REPORT - SEPARATE SHEET**

International application No. PCT/JP99/07279

VII Certain defects

- 1 Reference signs in parentheses should have been inserted in the claims to increase their intelligibility, Rule 6.2(b) PCT.
- 2 The documents D1 and D2 have not been identified in the description nor as the relevant background art disclosed therein been discussed. The requirements of Rule 5.1(a)(ii) PCT are, thus, not fulfilled.

VIII Certain observations

- 1 Article 6 PCT :

Claim 6 : the expression "said pair of the right and left front keys functioning as either of a ENTER/RETURN key and a SPACE key being included in said right and left halves thereof, respectively" is unclear.

It could mean either :

- (a) the both keys are in the same half of the keyboard or
- (b) that each half of the keyboard contains only one of these keys ?

If (a) then the claim should have been rephrased, for example, as "said pair of the right and left front keys functioning as either of a ENTER/RETURN key and a SPACE key both being included in said right or said left half"

If (b) then the claim should have been rephrased, for example, as "said pair of the right and left front keys functioning as either of a ENTER/RETURN key and a SPACE key being such that one key is included in each said right and left halves respectively".

TENT COOPERATION TREATY

PCT

INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference HK1	FOR FURTHER ACTION see Notification of Transmittal of International Search Report (Form PCT/ISA/220) as well as, where applicable, item 5 below.	
International application No. PCT/JP 99/ 07279	International filing date (day/month/year) 24/12/1999	(Earliest) Priority Date (day/month/year) 26/07/1999
Applicant KUROSAWA, HAJIME et al.		

This International Search Report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This International Search Report consists of a total of 2 sheets.
☒ It is also accompanied by a copy of each prior art document cited in this report.

1. Basis of the report

a. With regard to the language, the international search was carried out on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.

☐ the international search was carried out on the basis of a translation of the international application furnished to this Authority (Rule 23.1(b)).

b. With regard to any nucleotide and/or amino acid sequence disclosed in the international application, the international search was carried out on the basis of the sequence listing :

☐ contained in the international application in written form.

☐ filed together with the international application in computer readable form.

☐ furnished subsequently to this Authority in written form.

☐ furnished subsequently to this Authority in computer readable form.

☐ the statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.

☐ the statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished

2. ☐ Certain claims were found unsearchable (See Box I).

3. ☐ Unity of invention is lacking (see Box II).

4. With regard to the title,

☒ the text is approved as submitted by the applicant.

☐ the text has been established by this Authority to read as follows:

5. With regard to the abstract,

☒ the text is approved as submitted by the applicant.

☐ the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box III. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

6. The figure of the drawings to be published with the abstract is Figure No.

☒ as suggested by the applicant.

☐ because the applicant failed to suggest a figure.

☐ because this figure better characterizes the invention.

4
☐ None of the figures.

INTERNATIONAL SEARCH REPORT

International Application No.

PCT/JP 99/07279

A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 B41J5/10

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 B41J

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 3 698 532 A (DODDS IRVINE) 17 October 1972 (1972-10-17) column 2, line 6 - line 27; figure 1	1-4,6
X	US 5 351 066 A (HOYLE KEITH W ET AL) 27 September 1994 (1994-09-27) column 11, line 67 - column 12, line 29; figures 1A,,1B	1-4,6
A	US 4 613 247 A (MCGUNNIGLE ROGER J) 23 September 1986 (1986-09-23) page 2, line 19 - line 32; figures 14-19	1-6
A	GB 2 189 195 A (SUN JIUN YIH) 21 October 1987 (1987-10-21) figure 5	1-6

☐ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

* Special categories of cited documents :

- "A" document defining the general state of the art which is not considered to be of particular relevance
- "E" earlier document but published on or after the international filing date
- "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- "O" document referring to an oral disclosure, use, exhibition or other means
- "P" document published prior to the international filing date but later than the priority date claimed

- "T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
- "&" document member of the same patent family

Date of the actual completion of the international search

10 March 2000

Date of mailing of the international search report

20/03/2000

Name and mailing address of the ISA

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Authorized officer

Bridge, S

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/JP 99/07279

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
US 3698532	A	17-10-1972	NONE	
US 5351066	A	27-09-1994	AU 2300992 A CA 2112402 A WO 9301054 A EP 0594718 A	11-02-1993 21-01-1993 21-01-1993 04-05-1994
US 4613247	A	23-09-1986	US 4715736 A	29-12-1987
GB 2189195	A	21-10-1987	NONE	